



Asbestos Survey And Lead Paint Survey

Site:

**Carver Elementary School
11150 Santa Rosalia
Stanton, CA 90680**

Prepared for:

**Garden Grove Unified School District
8211 Lampson Avenue
Garden Grove, CA 92841**

July 16, 2013



Cardinal Environmental Consultants, Inc.

2691 Dow Avenue, Suite C-2
Tustin, CA 92780
(714) 730-5931
fax (714) 730-1697

Date of report: January 8, 2013

Asbestos Survey Investigation

Owner/Client:

Garden Grove Unified School District
10331 Stanford Avenue
Garden Grove, CA 92840
(714) 663-6000

Site Information

Carver Elementary School
11150 Santa Rosalia,
Stanton CA 90680

The site consists of portable classroom buildings, multi-purpose / cafeteria building, administration building, and four standard classroom buildings. The fixed structures are constructed of stucco and wood typical of classroom construction on a concrete slab. All portable classrooms are constructed of wood on a raised foundation. The campus comprises of approximately 35,000 square feet of functional space.

Regulatory Compliance

On January 2, 2012 Cardinal Environmental Consultants Inc., conducted an asbestos survey of Carver Elementary School. The survey was completed in compliance with the federal AHERA (Asbestos Hazard Emergency Response Act) 40 CFR Part 763 subpart E. The Act indicates procedures for sampling and reporting of asbestos information (about the school) to students, staff, and contractors working on schools where students K through 12 are present.

Adherence to NESHAP (National Emission Standard for Hazardous Air Pollutants) has been achieved with compliance to South Coast Air Quality Management District's Rule 1403. SCAQMD is the local air quality district that regulates and monitors asbestos abatement activity in the region of the school district.

Sampling Methodology- Asbestos

Cardinal Environmental Consultants Inc. used several procedures from visual assessments to tactile assessments and a modified random sampling protocol to collect the samples of the suspect asbestos containing material. Cardinal's sampling procedures incorporate the use of plastic Ziploc bags, labeled with black permanent markers per a unique numbering sequence. One label with the suspect samples collected for this report was given a unique sample identification number. A second description was placed on the bulk sample log. Information about the sample, including the sample type and location was noted on the sheet as each sample was collected.

Asbestos: Any building material which contains asbestos in an amount greater than 1% by weight, area.

<1% Asbestos: Federal regulations and SCAQMD (South Coast Air Quality Management District) do not regulate asbestos at this percentage. Notifications to these agencies do not apply. However, OSHA regulations do apply. These are specific to "worker protection" issues. A contractor who is "DOSH certified" is required if removing more than a 100 square feet. Federal and State regulations do not regulate the disposal of this type of construction debris with this level of asbestos. However, your local landfill may have a "zero tolerance" for any asbestos containing debris.

Suspect Asbestos-Containing Materials

Samples of suspect Asbestos-containing materials were taken throughout the interior and exterior of the buildings. We were able to collect representative samples of all the building materials.

The following materials were tested:

- ☐ 12X12 white vinyl floor tile associated with mastic
- ☐ 9X9 brown vinyl floor tile with mastic
- ☐ Carpet mastic
- ☐ Floor leveling compound
- ☐ Brown 4" baseboard associated with mastic
- ☐ Aqua 4" baseboard associated with mastic
- ☐ White baseboard mastic
- ☐ 1X1 ceiling tile
- ☐ Plaster
- ☐ Window putty
- ☐ Chalk board mastic
- ☐ Barrier paper
- ☐ Roof mastic
- ☐ Rolled on roofing
- ☐ Air O Cell
- ☐ Exterior stucco

Results

All samples were packaged and shipped to Patriot Laboratories an NVLAP accredited (#200358- 0) laboratory. The analysis procedure used to determine the presence of asbestos is outlined in the Code of Federal Regulations 40 CFR part 763, Section 1, Appendix A, Polarized Light Microscopy.

The following tables depict the asbestos at the school. The investigator has reviewed the results and construction of the buildings and made adjustments to the locations and the quantities based on "homogeneous areas". AHERA can require that like areas in type, construction, and use (that test positive for asbestos) be combined with other similar areas. Therefore, some areas may not be specifically tested for asbestos but be included in an area of asbestos. Likewise, an area that has tested negative for asbestos could be included in the asbestos table because of the definition of "homogeneous area".

Subsequent tables in this document depict what was sampled and the outcome of each. Those subsequent tables should be used for clarification and not for quantification of asbestos.

Asbestos:

A Building (Administration)		
9X9 brown vinyl floor tile with mastic	Throughout (under carpet, cabinets, walls etc...)	4,000 sf
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	10 ea
Transite panels	Throughout (3'X4' Pieces)	24 ea
Transite pipe	Throughout Approximately 4"-6" vent line	2 ea

B Building		
9X9 brown vinyl floor tile or mastic	Throughout (under carpet, cabinets, walls etc...)	4,000 sf
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	10 ea
Transite panels	Throughout (3X4' Pieces)	24 ea
Transite pipe	Throughout Approximately 4"-6" vent line	2 ea

C Building		
9X9 brown vinyl floor tile or mastic	Throughout (under carpet, cabinets, walls etc...)	4,000 sf
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	10 ea
Transite panels	Throughout (3X4' Pieces)	24 ea
Transite pipe	Throughout Approximately 4"-6" vent line	2 ea

D Building		
9X9 brown vinyl floor tile or mastic	Throughout (under carpet, cabinets, walls etc...)	10,000 sf
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	20 ea
Transite panels	Throughout (3X4' Pieces)	48 ea
Transite pipe	Throughout Approximately 4"-6" vent line	2 ea

E Building (Multi-Purpose Building)		
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	20 ea
Air o cell	Throughout	50 lf
Flex collars	Mechanical room	2 ea
Transite pipe	Throughout Approximately 4"-6" vent line	3 ea

F Building (Kindergarten)		
Pipe insulation (elbows)	Throughout restrooms, janitor closets- associated with hot water system (presumed behind walls, mechanical, ceiling spaces etc...)	10 ea
Transite panels	Throughout (3X4' Pieces)	16 ea
Transite pipe	Throughout Approximately 4"-6" vent line	1 ea

Site Wide		
Transite pipe	Throughout (underground utilities)	1,000 lf

The ***ESTIMATED*** quantities and locations ***ARE NOT*** to be used for bidding purposes. It is the sole responsibility of the contractor to verify quantities and locations of hazardous materials in the path of construction through site visits and contractual bid set documents, including, but not limited to all specifications, drawings, and addenda. Any discrepancies between the contractual bid set documentation and sit visits must be submitted in writing to the Owner or Owner's representative, ***PRIOR*** to bidding.

Summary

The following summary discusses specific elements related to asbestos at Carver Elementary School.

Carver ES

Some of the TSI has been removed in previous abatements; however elbow insulated lines are visible. Because the pipe runs disappear into wall cavities that we could not explore; we have assumed more elbow insulated lines exist. Contractors should calculate our assumptions into their bids or proposals.

Asbestos floor tile was discovered under carpet throughout all classrooms Floor tile may be discovered under cabinets and walls; once demolition has occurred.

Underground transite pipe (associated with utilities) is located at the site. The exact quantity and size is unknown. Typically, pipes are 6" in diameter and associated with water lines. In some cases, smaller 2" and 3" lines exist and are associated with electrical lines. Contractors should verify the scope of work and determine the level of impact and tailor their abatement as necessary.

Portables

During our investigation we discovered the portables were constructed post 1985. Under AHERA (Asbestos Hazard Emergency Response Act) 40 CFR Part 763 subpart E an asbestos survey is not required.

Further Discussion

We have included the results of all components tested. If new suspect materials are uncovered during demolition, work should stop until proper testing can be completed.

Contractors are obligated to review the scope of work when determining the asbestos removal quantities. The table lists all of the asbestos in the building not the removal quantities. The contractor should review the plans to determine the exact removals.

Although we aggressively searched for asbestos, the contractor should be made aware of the potential of uncovering asbestos during demolition. A supervisor trained in identifying asbestos should be present at the beginning of demolition.

Date: 01/08/13

Sincerely yours,
CARDINAL ENVIRONMENTAL CONSULTANTS INC.,
A California Corporation
By:

Daniel Gonzales

Daniel Gonzales
California Site Surveillance Technician #06-4103



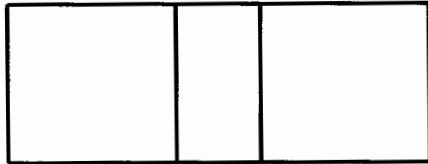
By:

Ronald R. McDaniel
California Certified Asbestos Consultant #01-2865

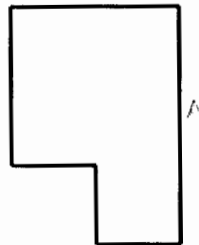
Diagrams

Carver Elementary School
11150 Santa Rolalia Street
Stanton, Ca 90680

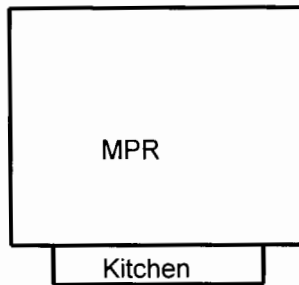
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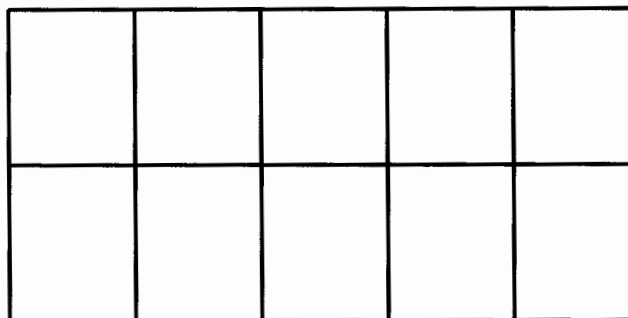


A



E

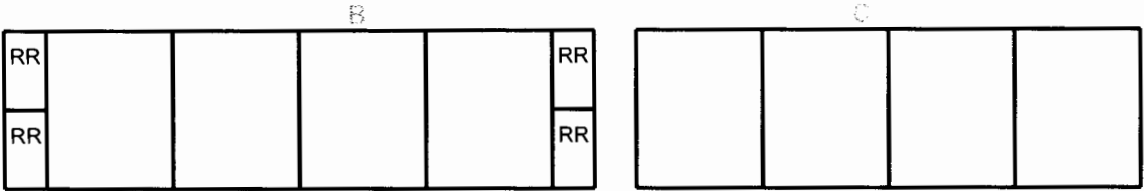
 Carpet over 9X9/Mastic



D

Carver Welementary School
11150 Santa Rosalia Street
Stanton, Ca 90680

1 3 2013



☐ Carpet over 9X9/Mastic

Bulk Sample Data

BULK SAMPLE DATA - ASBESTOS

Client: Garden Grove Unified School District

Location: Carver Elementary School

Date: 12/26/12

Sample #	Results	Material	F/NF	Sample Location
<i>CES-B-01</i>	<i>3% Chrysotile</i>	<i>Carpet mastic</i>	<i>NF</i>	<i>Building B- room 1 (under carpet)</i>
<i>CES-B-02</i>	<i>83% Chrysotile</i>	<i>Air O Cell</i>	<i>F</i>	<i>Building B- heater room</i>
CES-B-03	None Detected None Detected	Floor leveling compound	NF	Homogeneous throughout school
CES-B-04	None Detected None Detected	12X12 white vinyl floor tile associated with mastic	NF	Building B- splash areas
CES-B-05	None Detected	Aqua 4" baseboard associated with mastic	NF	Building B- splash areas
<i>CES-C-06</i>	<i>4% Chrysotile</i> <i>6% Chrysotile</i>	<i>9X9 brown vinyl floor tile with mastic</i>	<i>NF</i>	<i>Building C- room 5 (under carpet)</i>
CES-C-07	None Detected	Plaster	NF	Homogeneous throughout campus (baths, mechanical rooms, etc.)
CES-D-08	None Detected	Carpet mastic	NF	Homogeneous throughout campus
CES-D-09	None Detected	1X1 ceiling tile	F	Homogeneous throughout campus

BULK SAMPLE DATA - ASBESTOS

Client: Garden Grove Unified School District

Location: Carver Elementary School

Date: 12/26/12

Sample #	Results	Material	F/NF	Sample Location
CES-E-10	None Detected	White baseboard mastic	NF	Building E- under baseboard
CES-E-11	None Detected	12X12 white vinyl floor tile associated with mastic	NF	Building E- MPR
CES-E-12	None Detected	Exterior stucco	NF	Homogeneous throughout campus
CES-E-13	None Detected	Plaster	NF	Homogeneous throughout campus (baths, mechanical rooms, etc.)
CES-E-14	None Detected	12X12 white vinyl floor tile	NF	Building E- ballroom (under carpet)
CES-F-15	3% Chrysotile	Carpet mastic	NF	Homogeneous throughout campus
CES-F-16	None Detected	12X12 white vinyl floor tile associated with mastic	NF	Building F- workroom
CES-A-17	None Detected	Window putty	F	Homogeneous throughout campus
CES-B-18	3% Chrysotile	Air O Cell	F	Building B- Homogeneous throughout campus

BULK SAMPLE DATA - ASBESTOS

Client: Garden Grove Unified School District

Location: Carver Elementary School

Date: 12/26/12

Sample #	Results	Material	F/NF	Sample Location
CES-19	None Detected	Chalk board mastic	NF	Homogeneous throughout campus
CES-20	None Detected	Roof mastic	NF	Homogeneous throughout campus
CES-21	None Detected	Roof mastic	NF	Homogeneous throughout campus
CES-22	None Detected	Barrier paper	F	Homogeneous throughout campus
CES-23	None Detected	Rolled on roofing	NF	Homogeneous throughout campus
CES-24	None Detected	Brown 4" baseboard associated with mastic	NF	Building E- MPR- stage

Lab Results

Certificate of Analysis
PLM Asbestos Identification

tel - 714-899-8900
 free - 888-743-0998
 fax - 714-899-7098
 www.patriotlab.com

1041 S. Placentia Avenue, Fullerton, CA 92831



Cardinal Environmental Consultants Inc.
 2691 Dow Ave. Ste. C2
 Tustin, CA 92780

Report Number: 482294
 Project Number:
 Project Name: GGUSD Carver Elementary School MOD
 Project Location:

Date Collected: 1/2/2013
 Date Received: 1/3/2013
 Date Analyzed: 1/4/2013
 Date Reported: 1/7/2013

Collected By: Daniel Gonzales
 Claim Number:
 PO Number:
 Number of Samples: 25

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
482294-001 CES-B-01	NA	Mastic	Orange Black	71% Binder 26% Tar
Chrysotile	3 %			
Total Asbestos	3 %			
482294-002 CES-B-02	NA	Insulation	Grey	9% Cellulose 8% Mineral Wool
Chrysotile	83 %			
Total Asbestos	83 %			
482294-003 CES-B-03	NA	Plaster	Grey Beige	61% Minerals 26% Carbonate 4% Cellulose 6% Synthetic Fibers 3% Paint
Total Asbestos	None Detected			
482294-003M CES-B-03	NA	Mastic	Black Orange	57% Binder 43% Tar
Total Asbestos	None Detected			
482294-004 CES-B-04	NA	Floor Tile	White Grey	79% Carbonate 21% Vinyl Binder
Total Asbestos	None Detected			

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Collected By: Daniel Gonzales
 Claim Number:
 PO Number:
 Number of Samples: 25

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
482294-005 CES-B-05	NA	Base Cove	Blue	64% Carbonate 36% Vinyl Binder

Total Asbestos **None Detected**

482294-006 CES-C-06	NA	Floor Tile	Brown	75% Carbonate 21% Vinyl Binder
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Chrysotile 4 %
Total Asbestos **4 %**

482294-006M CES-C-06	NA	Mastic	Black	94% Tar
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Chrysotile 6 %
Total Asbestos **6 %**

482294-007 CES-C-07	NA	Plaster	White Beige	71% Minerals 24% Carbonate 3% Paint 2% Cellulose
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Total Asbestos **None Detected**

482294-008 CES-D-08	NA	Mastic	Yellow	100% Binder
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Total Asbestos **None Detected**

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Date Reported: 1/7/2013

Collected By: Daniel Gonzales
Claim Number:
PO Number:
Number of Samples: 25

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
482294-009 CES-D-09	NA	Acoustic Ceiling Tile	Orange White	96% Cellulose 4% Paint
Total Asbestos	None Detected			
482294-010 CES-E-10	NA	Paint Chip	White Beige	100% Paint
Total Asbestos	None Detected			
482294-011 CES-E-11	NA	Floor Tile	White	79% Carbonate 21% Vinyl Binder
Total Asbestos	None Detected			
482294-012 CES-E-12	NA	Plaster	White Grey	71% Minerals 26% Carbonate 3% Paint
Total Asbestos	None Detected			
482294-013 CES-E-13	NA	Plaster	White	71% Minerals 26% Carbonate 3% Paint
Total Asbestos	None Detected			
482294-014 CES-E-14	NA	Floor Tile	White	79% Carbonate 21% Vinyl Binder
Total Asbestos	None Detected			

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Date Analyzed: 1/4/2013
Date Reported: 1/7/2013

Collected By: Daniel Gonzales
Claim Number:
PO Number:
Number of Samples: 25

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
482294-015 CES-F-15	NA	Mastic	Yellow Black	60% Binder 37% Tar
Chrysotile	3 %			
Total Asbestos	3 %			
482294-016 CES-F-16	NA	Floor Tile	White	79% Carbonate 21% Vinyl Binder
Total Asbestos	None Detected			
482294-017 CES-A-17	NA	NA	Black Green Beige	96% Vinyl Binder 4% Paint
Total Asbestos	None Detected			
482294-018 CES-B-18	NA	Window Putty	Grey	91% Carbonate 4% Cellulose
Chrysotile	3 %			
Total Asbestos	3 %			
482294-019 CES-19	NA	Mastic	Black	100% Tar
Total Asbestos	None Detected			
482294-020 CES-20	NA	Tar	Black Grey	89% Tar 11% Cellulose
Total Asbestos	None Detected			

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Project Number:
Project Name: GGUSD Carver Elementary School MOD
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Date Collected: 1/2/2013
Date Received: 1/3/2013
Date Analyzed: 1/4/2013
Date Reported: 1/7/2013

Collected By: Daniel Gonzales
Claim Number:
PO Number:
Number of Samples: 25

Lab/Client ID/Layer	Location	Material Description	Color	Composition (%)
482294-021 CES-21	NA	NA	Brown Grey Black	88% Tar 12% Cellulose
Total Asbestos		None Detected		
482294-022 CES-22	NA	NA	Orange Grey Black	74% Cellulose 26% Tar
Total Asbestos		None Detected		
482294-023 CES-23	NA	NA	Black Silver	78% Tar 18% Glass Fibers 4% Paint
Total Asbestos		None Detected		



Peter Mai - Analyst



Ian Reyes - Approved By

Bulk sample(s) submitted was (were) analyzed in accordance with the procedure outlined in the US Federal Register 40 CFR 763, Subpart F, Appendix A; EPA-600/R-93/116 (Method for Determination of Asbestos in Building Materials), and EPA-600/M4-82-020 (US EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples). Samples were analyzed using Calibrated Visual Estimations (CVES); therefore, results may not be reliable for samples of low asbestos concentration levels. Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite unless specifically requested by the customer to report analytical results for individual layers. This report applies only to the items tested. Results are representative of the samples submitted and may not represent the entire material from which the samples were collected. "None Detected" means that no asbestos was observed in the sample. "<1%" (less than one percent) means that asbestos was observed in the sample but the concentration is below the quantifiable level of 1%. This report was issued by a NIST/NVLAP (Lab Code 200358-0) and CADOHS- ELAP (Cert. No. 2540) accredited laboratory and may not be reproduced, except in full without the expressed written consent of Patriot Environmental Laboratory Services, Inc. This report may not be used to claim product certification, approval or endorsement by NIST, NVLAP, ELAP or any government agency.

482294

Cardinal Environmental Consultants Inc.
2691 Dow Avenue, Suite C-2
Tustin, CA 92780

SAMPLE SUBMITTAL/CHAIN OF CUSTODY FORM

LAB NAME: Patriot Laboratories

PROJECT NAME: GGLSD; CARVER ELEMENTARY SCHOOL
MOD

DATE: 1/2/13

TOTAL # SAMPLES: 24 23
DG

CARRIER: Hand

TYPE:

☒ ASBESTOS BULK

☐ WATER

☐ AIR

☐ OTHER:

ANALYSIS:

☒ PLM

☐ TEM

☐ OTHER

TURNAROUND:

☐ RUSH

☐ 24 HOUR

☐ 48 HOUR

☒ 72 HOUR

☐ FIVE DAY

☐ OTHER:

1/7/13 @ 5

RESULTS REQUESTED:

☐ VERBAL (714/730-5931)

☐ FAX (714/730-1697)

☒ E-MAIL: Daniel@CardinalEnvironmental.org

☐ CELL: (562/652-8036) Daniel Gonzales

SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
CES-B-01	CES-E-11	CES-21		
02	12	22		
03	13	23		
04	14	24 DG		
05	CES-F-15			
CES-C-06	16			
07	CES-K-17			
CES-D-08	CES-B-18			
09	CES-19			
CES-E-10	20			

INSTRUCTIONS:

SAMPLES TAKEN BY: Daniel Gonzales

PRINT:

Daniel Gonzales

DATE/TIME: 1/2/13 1000

SAMPLES DELIVERED BY: Daniel Gonzales

PRINT:

Daniel Gonzales

DATE/TIME: 1/2/13 1800

SAMPLES RECEIVED BY: Kemp

PRINT:

K. Kemp

DATE/TIME: 1/3/13 800 PB

Lead Survey



Cardinal Environmental Consultants, Inc.
2691 Dow Avenue, Suite C-2
Tustin, CA 92780
(714) 730-5931
fax (714) 730-1697

Date of report: January 3, 2013

Lead Paint Surface Survey

Owner/Client:

Garden Grove Unified School District
10331 Stanford Avenue
Garden Grove, CA 92840
(714) 663-6000

Site Information

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11150 Santa Rosalia,
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The site consists of portable classroom buildings, multi-purpose / cafeteria building, administration building, and four standard classroom buildings. The fixed structures are constructed of stucco and wood typical of classroom construction on a concrete slab. All portable classrooms are constructed of wood on a raised foundation. The campus comprises of approximately 35,000 square feet of functional space.

Regulatory Compliance

The EPA and the Department of Housing and Urban Development (HUD) have established quantitative standards for lead concentration in painted surfaces. The standard for public housing, above which abatement or removal is required, is 1.0 mg/cm² or 0.5% lead by weight. No official standard exists for school buildings. Los Angeles County and L.A. Unified School District are understood to have set a standard of 0.7 mg/cm² - above which abatement is required. Currently most of the regulations relate specifically to abatement activities.

Generally, HUD (Department of Housing and Urban Development) initiated lead regulations which were then adopted by the state CDPH (California Department of Public Health).

Renovation, Repair and Painting Rule (RRP)

The new regulation outlines procedures for identifying lead paint and completing abatement of lead paint. Additional requirements for certification and clearances are also addressed. Abatement activity triggers the regulation when paint systems with 1.0mg/C² or .5% are disturbed.

Regulatory Compliance Con't

The new EPA lead regulation, 40CFR 745, *Renovation, Repair and Painting Rule (RRP)*, which became effective April 22, 2010, requires construction professionals to become "Certified Renovators" and firms to become "Certified Firms". The regulation applies to all contractors, property managers and other building professionals who disturb painted surfaces while conducting plumbing, electrical, painting, drywall, flooring, window replacement, landscaping, construction, renovation, remodeling and demolition work.

The new rule is instigated when more than six square feet of interior painted surfaces and twenty square feet of exterior surfaces are disturbed. As with HUD and the state adoption of HUD, the rule applies to lead paint systems above (1.0 mg/cm² as indicated by an XRF device or .5% by weight).

The following is a table that outlines the regulations and requirements for each.

	Lead Levels Instigated	Training and certifications requirements	Disturbance level	Firm Licensing
Federal HUD State CDPH	1.0mg/C2 or .5%	Worker training and certificate/special state certificate for supervisor	When conducting abatement to remove a lead hazard for a period of twenty years or more	CSLB license is required to conduct contract work
Federal Lead Renovation Rule	1.0mg/C2 or .5%	Supervisor renovator certificate/ at least "in house" training certificates for additional workers	6 sf interior and 20 sf of exterior	Contracting Firm must be Certified
OSHA 1532.1	600 ppm Or .06%	no certificates required	Initiated by "trigger task" to include manual demolition and sanding	No special license

OSHA Compliance

OSHA (Occupational Safety and Health Administration) through the regulation 1532.1 further delineates requirements for lead activities. 1532.1 defines "trigger tasks" (e.g. manual demolition, etc.) that disturb lead paint and the contractor responsibilities to its employees. The regulation specifically addresses PEL's (permissible exposure limits) to staff disturbing lead paint. This regulation is initiated when "trigger task" work is implemented on paint systems with .06% or 600 ppm (parts per million). It should be noted that this level (.06%) is virtually any amount of lead paint. As of January 2002, OSHA now requires all contractors to notify the department when disturbing lead paint above 1.0mg/cm². This level is the same threshold for abatement by HUD.

Regulatory Compliance Con't

OSHA requires that the employer is required to protect his employees to the level stipulated in the Standard, or to do an exposure assessment. An exposure assessment is the air monitoring of an employee during lead work to determine his exposure and ultimately to determine the level of protection required. This assessment is applicable to paint systems above .06% or 600 ppm.

Methodology

The data was developed using an X Ray Diffraction device, which reports lead content in milligrams per square centimeter of surface area (mg/cm²). The reading represents the quantity of lead between the surface and the substrate under the square centimeter of surface area contacted by the test device. If the substrate contains lead, the test result will be affected. (Galvanized metal is an example of this.) A positive reading by the XRF definitely means that lead was detected.

The test locations are described according to the following convention: Each building is considered to have an "A" side, which is closest to the main street adjacent to the school. The B-side is the first side clockwise while facing the A side, followed by the C side and the D side. This convention is followed inside and outside of the building.

Where actual samples of the material have been collected and analyzed by a laboratory, the results are reported in weight percent lead in the "comments" column of the survey table. Such data represents the sample only, and may or may not represent the entire thickness of paint on a surface. However, it definitely should not be affected by the substrate.

Results

The survey of Carver Elementary School included 102 XRF readings, covering representative building components, substrates, and paint colors on or in the building. The lead levels in the larger paint systems are low. The higher lead levels are found in various components. (I.e. sinks, fountains...).

The following table lists the higher lead containing components that could likely require demolition and/or removal. These items would certainly require "abatement procedures" be implemented.

Subsequent tables illustrate all of the paint systems at the school site. Regulations may apply to other components with lower levels of lead. The contractor is required to review and verify the scope of work for the project and determine the impact of activities on lead painted surfaces (at any level).

The following table lists the components that are above the HUD regulated level of 1.0 mg/cm².

Building	Component	Location	
A	Fascia	Exterior	200 lf
A	Porcelain Sink	Interior	3 ea

Building	Component	Location	
B	Fascia	Exterior	500 lf
B	Fountain	Exterior	1 ea
B	Porcelain Sink	Interior	6 ea
B	Beam	Interior	150 lf
B	Door	Interior	10 ea
D	Door	Interior	16 ea
D	Porcelain Sink	Interior	10 ea
E	Door	Interior	16 ea
E	Porcelain Sink	Interior	5 ea
E	Fascia	Exterior	800 lf
E	Ceramic tile	Interior restroom	600 sf
K	Fountain	Exterior	2 ea
K	Fascia	Exterior	200 lf
K	Porcelain Sink	Interior	6 ea
K	Door	Interior	6 ea

The following table lists the components that are above the Los Angeles County and LAUSD standard of 0.7 mg/cm²

Building	Component	Location	
D	Fascia	Exterior	500 lf

Summary/Recommendations

Depending on the scope of work for the project; contractors should determine the level of contractor licensing for the abatement and/or work disturbing lead paint systems.

We recommend “lead certified” painting contractors for the painting of buildings coated with lead paint. Preparation of these surfaces falls under the “trigger task” category of OSHA 1532.1. Preparation of painted surfaces and the ultimate “guarantee” of the final painted product is better completed by a “single” contractor.

RRP certified firms should be considered for incidental work that disturbs small amounts of lead paint. These categories of work may include concrete coring (through lead paint) and structure welding (door hinges etc.).

Abatement companies with CDPH (California Department of Public Health) lead certified staff will be required for all abatement work. The companies selected will have to insure that a certified lead supervisor be present during abatement preparation and be within two hours (response time) during abatement activities.

Painting contractors will be required to collect all paint chips from the preparation activities. The contractor will sample and categorize the waste for disposal. Proof of sampling and waste disposal will be required.

Metal components (coated with lead paint) will likely be recycled. A letter (stating acceptance of material) will be required from the contractor’s recycling facility.

All other waste produced from abatement activities will be separated and staged in a safe storage area at the project site during the sampling process. The characterization of the waste can take up to two weeks and an area will need to be allocated for this purpose. The contractor will be required to conduct and pay all costs associated with the characterization of the waste. Copies (proof) of all characterization of waste will be demanded on completion and before waste transport.

Final Comments

Other contractors at the site should be made aware of the lead paint issues and use “lead safe” work practices. Sand blasting, dry sanding, and torching should be restricted in these areas or, if that is not feasible, use CDPH certified employees for these processes.

Lead Tables

Garden Grove Unified School District

Lead Survey

Carver Elementary School

Inspection Date: 1/4/2012

Bldg.	Location	Component	Substrate	Color	Lead Mg/cm2	Comments
K	A Int	Wall	Wood	White	0.02	K-A
	"	Window Sill	Wood	White	0.03	"
	"	Window Frame	Wood	White	0.03	"
	"	Beam	Wood	White	0.05	"
	C Int	Door Frame	Wood	White	0.01	"
	"	Door	Wood	Green	0.00	"
	D Int	Sink	Porcelain	White	44.60	"
	"	Wall	Plaster	White	0.12	Little Boys Bath
	"	Toilet	Porcelain	White	0.02	"
	"	Cabinet	Wood	White	0.00	"
	"	Sink	Porcelain	White	3.50	"
	C Ext	Window Frame	Wood	White	0.05	Slider
	"	Window Frame	Wood	White	0.02	"
	"	Window Sill	Wood	White	0.02	"
	"	Wall	Stucco	White	0.01	"
	"	Drinking Fountain	Porcelain	White	41.70	"
	"	Door	Wood	Green	1.40	"
	"	Door Frame	Wood	Green	0.05	"
	A Ext	Facia	Wood	Green	1.70	"
	"	Beam	Wood	Green	0.07	"
	"	Eave	Wood	White	0.40	"
	"	wall	Wood	White	0.10	"
	"	Fire Box	Metal	White	0.40	"
	"	Vent	Metal	White	0.40	"
A	D Int	Window Frame	Wood	White	0.12	Office
	"	Wall	Wood	White	0.01	"
	A Int	Door	Wood	White	0.01	Interior Door
	"	Door Frame	Wood	White	0.00	Interior Door
	"	Door	Wood	Green	0.02	Office
	"	Door Frame	Wood	White	0.02	"
	C Int	Sink	Porcelain	White	32.00	Lounge
	"	Window Frame	Wood	White	0.06	"
	D Int	Wall	Plaster	White	0.06	Nurse Bath
	C Int	Cabinet	Wood	White	0.00	Nurse Office
	A Ext	wall	Wood	White	0.13	
	"	Window Sill	Wood	White	0.09	
	"	Window Frame	Wood	White	0.07	
	"	Wall	Stucco	White	0.00	
	A Ext	Facia	Wood	Green	2.70	
	"	Eave	Wood	White	0.13	
	"	Cover	Wood	White	0.00	Walkway
	"	Cover Support	Wood	White	0.00	"
	"	Drip Cap	Metal	Green	0.00	"
Bldg.	B Ext	Facia	Wood	Green	1.80	
	"	Eave	Wood	White	0.05	
	"	Drinking Fountain	Porcelain	White	42.30	

Garden Grove Unified School District

Lead Survey

Carver Elementary School

Inspection Date: 1/4/2012

Bldg.	Location	Component	Substrate	Color	Lead Mg/cm2	Comments
B	B Int	Partition	Metal	Blue	0.02	Boys Bath
	"	Wall	Plaster	White	0.21	"
	"	Toilet	Porcelain	White	0.01	"
	"	Urinal	Porcelain	White	0.02	"
	"	Sink	Porcelain	White	0.05	"
	A Ext	Beam	Wood	Green	0.02	Room 1
	"	Window Frame	Wood	White	0.10	"
	"	Door	Wood	Green	1.80	"
	"	Door Frame	Wood	Green	0.01	"
	"	Fire Box	Metal	White	0.01	"
	"	Vent	Metal	White	0.40	"
	C Int	Sink	Porcelain	White	40.10	"
	"	Window Frame	Wood	Stain	0.01	"
	"	Wall	Wood	Stain	0.06	"
	"	Beam	Wood	Stain	0.02	"
	A Int	Window Frame	Wood	White	0.03	"
	"	Door Frame	Wood	White	0.03	"
	D Ext	Drinking Fountain	Porcelain	White	31.40	
	C Ext	Window Panel	Transite	Green	0.01	
	"	Window Frame	Wood	White	0.00	
	"	Beam	Wood	Green	1.70	
	"	Wall	Stucco	White	0.00	
	A Ext	Facia	Wood	Green	1.70	
	"	Eave	Wood	White	0.06	
	"	Door	Wood	Green	1.40	Room 4
	"	Door Frame	Wood	Green	0.01	"
	"	Fire Box	Metal	White	0.17	"
	"	Vent	Metal	White	0.00	"
	C Int	Sink	Porcelain	White	46.50	"
	B Int	Wall	Wood	Stain	0.01	"
	A Int	Cabinet	Wood	Stain	0.00	"
	"	Window Frame	Wood	White	0.01	"
	"	Door Frame	Wood	White	0.03	"
D	C Ext	Wall	Stucco	White	0.00	
	"	Facia	wood	Green	0.80	
	"	Beam	Wood	Green	0.01	
	"	Eave	Wood	White	0.30	
	"	Window Panel	Transite	Green	0.02	Room 8
	"	Door	Wood	Green	1.40	"
	A Int	Sink	Porcelain	White	41.20	"
	"	Wall	Wood	White	0.01	"
	B Int	Heater	Metal	tan	0.05	"
	"	Beam	Wood	Stain	0.00	"
E	A Ext	Wall	Stucco	White	0.01	
	"	Facia	Wood	Green	0.19	
	"	Beam	Wood	green	0.02	

Garden Grove Unified School District

Lead Survey

Carver Elementary School

Inspection Date: 1/4/2012

Bldg.	Location	Component	Substrate	Color	Lead Mg/cm2	Comments
E	A Ext	Door	Wood	Green	1.20	MPR
	"	Door Frame	Metal	Green	0.00	"
	C Int	Wall	Plaster	White	0.01	MPR Music Room
	A Int	Door	Wood	Green	1.10	MPR
	"	Door Frame	Metal	Green	0.13	"
	"	Drinking Fountain	Porcelain	White	0.10	MPR Interior
	D Int	Wall	Plaster	White	0.06	Stage
	C Int	Table Holder	Wood	White	0.00	MPR
	"	Table Holder	Metal	Tan	0.00	"
	A Int	Base Tile	Ceramic	Beige	9.00	Staff Bathroom